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(54) Title: COMPUTERIZED AND NETWORKED DISTRIBUTION SYSTEM

(57) Abstract: This invention relates to systems, processes and facilities for pick -up, drop -off and delivery, of commodities.

**Title of the Invention : COMPUTERIZED AND NETWORKED DISTRIBUTION SYSTEM**

**Description of the Invention :**

It is common for commodities ordered over the internet to be delivered by a courier or some other delivery agency to the customer's location. This method has certain disadvantages in that the customer has to be physically present to receive secure delivery of goods from the delivering agent and in that it is effort intensive in that the delivery agent has to arrive at a location at a time specified by the customer and that the customer has to be present at that location and time in order to effect a secure and recorded delivery. This method also has disadvantages in that it is difficult to co-ordinate a number of deliveries by different agents to the same location at the same time. The delivery of perishable goods such as frozen or heated commodities are also constrained by the delivery agent's method of transportation and delivery having to have facilities to maintain the desired temperatures.

I have found that these disadvantages may be overcome by the use of a set of processes,systems and facilities integrated around lockers or bays in a pick -up and drop -off system which will allows for easy pick -up and drop -of of commodities.

The system comprises a set of system components. The system comprising these components and the interactions and relationships between said system components, is described below:

COMPONENT 1 - THE COMPUTERIZED PICK -UP AND DROP -OFF PROCESSING AND INFORMATION SYSTEM COMPONENT :

This system component provides a means for recording choices of pick -up or drop -off instructions for the purpose of linking them to order or return details and to other user and consignment details input online or already existing on connected systems by using a computerized pick -up and drop -off information and processing system for the purpose of displaying, inputting, recording, processing, storing and transmitting records containing commodity pick-up or commodity drop -off and user related information, said component will comprise:

a) An input and display component, presented as an interface to said system as a part of the ordering process or return process as presented to the user by a commodity provider's order input system or returns handling system, on any displays connected to computers connected over the internet or on any displays connected to another computer system or on any displays on any independent computer system or to work on any displays of computers operating in any of these modes, to present input and or display screens to users over the internet, over a dedicated network, at a stand alone computer console or any combination of these, to offer a choice of and to accept input of and to communicate to a processing component described in b), pick-up or drop -off locations,

pick-up or drop -off times, pick-up or drop -off related charge details and user details, user payment mechanism details, consignor and consignee identification details, pick -up or drop -off commodity details, or any combination of these , through any input device connected by any means whatsoever to the computer to which the displaying device is connected.

b) The processing component will operate independently or integrated with the setup described in a) and include program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system - to operate on computer processors integral to computers connected over the internet or on computer processors integral to computers connected to another computer network or on computer processors integral to an independent computer system or to operate on any computer processors integral to computers operating in any of these modes - to process existing records and to create new records by creating linking keys for the purpose of linking the data input by the user to consignor and consignee identification details, payment mechanisms and details, identification mechanisms , pick-up and drop -off related payment arrangements, pick-up or drop -off locations, pick-up or drop -off times or any combination of these, either to records newly entered by the user within the input component in 1a) or to records previously established by the user, details of which may reside in the memory of integrated or associated systems.

c) A networking component, either operating independently within this system or interfacing with system or network components such as hardware, software and communication protocols, resident on any computers on which the operations described in 1a) and 1b) will be performed, and using the standard networking hardware and communication protocols available to the computers on which the processes described in 1a) and 1b) are performed, for the purpose of linking this system to integrated or associated systems, either through the internet or through dedicated lines, to receive any information required for the operations integral to the operation of 1a) and 1b) and to transmit the results of the operations performed by 1 a) and 1 b)

d) A standard computer memory hardware and memory management component to support the functionality defined in 1a),1b) and 1c) said component resident on networked or otherwise connected systems to store, either permanently or temporarily, all or any of the information required by or created in the display, processing, or networking components defined in 1a), 1 b) and 1 c).

e) An output component comprising any standard commercial computer output devices or special output devices connected to the said system for the purpose of printing or otherwise outputting any or all records created by the processes of this system A standard computer operating system component resident on the computer system on

which this system will operate having program and command instructions to enable the functioning of COMPONENTS 1a),1b), 1c),1d) and 1e)

f)  A standard computer operating system component resident on the computer system on which this system will operate having program and command instructions to enable the functioning of 1 a), 1 b), 1 c), 1 d) and 1 e)

COMPONENT 2 - THE COMPUTERIZED PICK -UP, DROP -OFF, COMMODITY, CONSIGNMENT, CONSIGNOR AND CONSIGNEE PROCESSING AND INFORMATION SYSTEM COMPONENT:

This component provides the means for linking user related details records, consignment related records and delivery related records and to connect these linked records to the physical commodity by generating a unique record for the purpose of this link and creating a label, using an output component comprising any standard commercial or special computer output devices, containing this record in a bar-coded or any other form and by affixing said label to the ordered commodity or to a group of commodities to link the physical consignment to the aforementioned details, using said component for the purpose of printing, displaying, recording, combining, newly creating, processing, storing and transmitting records containing consignment or commodity related, pick-up or drop -off related or user related information gathered through processes and systems described in 1) with all or any of consignment details such as sizes, weights, dimensions , quantities, consignor and consignee details including identification details, payment mechanism details and any or all other details relating to consignments such as sizes, weights, dimensions, storage temperature and handling instructions which may reside on integrated, associated or related systems which are connected to this system over the internet or otherwise networked or, to any records which may be entered directly into this system . This system will comprise all or any of :

a)  An input and display component to be presented on any displays connected to computers connected over the internet or on any displays connected to another computer system or on any displays on any independent computer system or to work on any displays of computers operating in any of these modes, to present input and or display screens to users over the internet, over a dedicated network, at a stand alone computer console or any combination of these, to offer a choice of pick-up or drop -off locations, pick-up or drop -off times, pick-up or drop -off related charge details and consignor and consignee details, consignor and consignee payment mechanism details, pick -up or drop -off commodity details, consignor and consignee identification details or any combination of these, and to accept input through any input device connected to the computer to which the displaying device is connected by any means whatsoever and to communicate to the processing component described in 2 b)

b)  A processing component capable of operating independently or integrated with 2 a) – including program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system, to

operate on computer processors integral to computers connected over the internet or on computer processors integral to computers connected to another computer network or on computer processors integral to an independent computer system or to operate on any computer processors integral to computers operating in any of these modes - to process existing records and to create new records by combining and processing information gathered through the processes described in COMPONENT 1 with all or any of details relating to consignments for pick -up or drop -off including consignor and consignee details, consignor and consignee identification details, pick-up or drop -off locations and any or all other details relating to consignments for pick -up or drop -off, which may reside on integrated, associated or related systems or which may be entered directly into this system through 2 a) .

c)    A networking component either operating independently within this system or interfacing with system or network components resident on any computers operating 2 a) and 2 b) . and using the standard commercial networking hardware and communication protocols available to the computers on which the processes described in 2 a) and 2 b) are performed, for the purpose of linking this system to integrated or associated systems, either through the internet or through dedicated lines, to receive information required for the operations integral to 2 a) and 2 b) and to transmit the results of the operations performed by 2 a) and 2 b)

d)    A standard commercial computer memory hardware and memory management component to support the functionality defined in COMPONENTS 2 a), 2 b) and 2 c), said component either resident within this system or resident on integrated or associated systems to store, either permanently or temporarily, all or any of the information required by or created in the display, processing, or networking components defined in 2 a), 2 b) and 2 c).

e)    An output component comprising any standard computer output devices connected to the said system for the purpose of printing or otherwise outputting any or all records created by the processes described in 2 a), 2 b) and 2 c).

f)    A standard computer operating system component resident on the computer system on which this system will operate having program and command instructions to enable the functioning of 2 a), 2 b), 2 c), 2 d) and 2 e)


COMPONENT 3 - THE COMPOSITE COMPUTERIZED PICK -UP, DROP -OFF, COMMODITY, CONSIGNMENT, CONSIGNOR AND CONSIGNEE PROCESSING AND INFORMATION SYSTEM COMPONENT:

This component will combine all or any of the features defined in COMPONENT 1 and COMPONENT 2 to fulfil all or any of the functionality of COMPONENT 1 and COMPONENT 2 in addition to any other desired functionality.

COMPONENT 4 - THE CONSIGNMENT AND CONSOLIDATING CONTAINER LINKING COMPONENT:

This component provides the means for the creation and use of a link between the consignment and a container containing more than one said consignment and comprises of :

a)  Program instructions for the purpose of relating a consignment to a container containing grouped consignments by generating a unique container code to relate the said container to said consignments and to be used as a means for generating a grouped consignment code or, to relate a predefined container code to consignments to held within the said container by specifying which of the said consignments are to be contained in which of the said predefined containers and the use of the predefined code associated with the said container as a means of generating a grouped consignment code. Said program instructions operating within the system described in COMPONENT 1 in COMPONENT 2 or in COMPONENT 3 or within integrated, associated or related systems.

b)  The creation and use of a physical link between the consignment and a container containing more than one consignment, by creating a barcode label or any other identification label containing the grouped consignment code created by 4 a), using an output component comprising any standard commercial or special computer output devices connected to the any of the systems upon which this said means may operate, and by affixing this label to the container and then scanning the container code label and the consignment code labels as a means of establishing the grouped consignment code.

COMPONENT 5 - THE PRE -LABELED CONTAINER COMPONENT:

This component allows for the use of containers pre -labeled with a barcode or by other means, disposable or reusable, for use in COMPONENT 4.

COMPONENT 6 - THE PICK -UP AND DROP -OFF FACILITY STORAGE COMPONENT:

This component comprises a pick -up and drop -off facility either situated on its own premises or incorporated into other premises for the physical transfer of goods and commodities for the purpose of commercial and other transactions incorporating all or any of, in whole or part thereof, of the following

a)  A commodity distributing locker apparatus comprising many lockers of the same or different dimensions each identified and labeled with a barcode or by other means with an unique identifying code, for holding and dispensing consignments therein, collectively or individually accessible from the rear, Each having some, any or all of the following features: refrigerated or otherwise temperature controlled, an electronic display panel on the front, a locking mechanism on the front with automated combination setting mechanisms with a control means for controlling the setting of the locking mechanism to the same code for more than one locker . An electromagnetic, mechanical or optical or any other key mechanism to allow opening of the front door of the locker using a suitable key containing the code to open the lock, a detection sensor built into the door and frame

of the locker to determine if the locker is open or closed, an electro -mechanical door opening and closing mechanism, Red, Yellow and Green electronic indicators at the front and rear doors of the locker , an audio signal emitting device, an electromagnetic or electronic mike and speaker system, object sensors within the locker, and automated systems for loading and unloading the lockers. Built in readers, scanners or sensors to read the labels on consignments deposited therein and sensors to assist automated loading and unloading functions. Each locker connected to the processing setup described in COMPONENT 7 or to one or more electronic data processing and control units with resident memory, input and output devices and one or more terminals and resident and remotely accessed program instructions for localized processing or for networking with other computers through the internet or through dedicated lines for the purpose of communicating information about the contents of the lockers, setting the electronic lock combinations for the locker, to sense the outputs from the sensors built into the lockers. and to communicate information to set the state of the indicators and displays built into the front and rear doors of the lockers and to provide input to the control means for automated mechanical loading and unloading equipment operating upon the locker.

b) A commodity distributing storage facility comprising many defined locations of the same area and dimensions or of different areas and dimensions, each identified and labeled with a barcode or by other means with an unique identifying code, for storing packages therein, each defined location having some, any or all of the following features: Refrigerated or otherwise temperature controlled, shelving, built in readers or scanners to read the labels on consignments deposited therein and sensors to assist automated loading and unloading functions, built in automated mechanical loading and unloading equipment. Each defined location connected to the processing setup described in COMPONENT 7 or to one or more electronic data processing and control units with resident memory, input and output devices and one or more terminals and resident and remotely accessed program instructions for localized processing or for networking with other computers through the internet or through dedicated lines for the purpose sensing the outputs from the sensors located in the defined spaces and to communicate information to determine the state of the indicators and displays located within, or in the vicinity of the defined spaces and to and to provide input to the control means for automated mechanical loading and unloading equipment operating upon the defined location.

c) Loading bays comprising space for parking of a personal or other transport vehicle and a control console connected to the processing set -up described in COMPONENT 7 and incorporating a manual or an automated mechanical delivery system to effect pick ups or deliveries, from or to lockers or defined locations within the said facility, by the user from said loading bay. The loading bay may include dispensing ,vending machines or service machines either connected or unconnected to the processing facility described in

COMPONENT 7, to dispense and/or vend commodities and to provide services to the user when at that location.

d) Receptacles incorporating a scanning device or sensor, for receiving or dispensing containers as described in said COMPONENT 6 , and connected to the processing facility described in COMPONENT 7 for reading the bar code or any other label affixed to the container described in COMPONENT 4 and in COMPONENT 5 and to record return of the bin and to link the return to the records created as described in COMPONENT 1, COMPONENT 2 , COMPONENT 3, COMPONENT 5 and by COMPONENT 8.

e) The facility may include dispensing ,vending or service machines either connected or unconnected to the processing facility described in COMPONENT 7 to dispense and/or vend commodities and to provide services to the user when at the facility.

COMPONENT 7 - THE PICK -UP AND DROP -OFF FACILITY PROCESSING SET -UP COMPONENT:

This component comprises of a pick -up and drop -off facility processing system comprising one or a plurality of computers, and program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system operating upon these and total command means for performing any of the processes within the facility described as COMPONENT 6 and connected to one or a plurality of lockers as described in COMPONENT 6 a) to one or a plurality of defined locations as described in COMPONENT 6 b) and to one or a plurality of loading bays as described in COMPONENT 6 c) and connected to one or more computer input, display and output devices within the facility at which the lockers and defined spaces are situated, these connected to integrated or associated computer systems on connected computers, through one or a plurality of dedicated networks or through the internet as a command means for controlling various operations and processes within the said facility and for the purpose of accepting input from users and for communicating information to users located both within and outside the facility described in COMPONENT 6.

COMPONENT 8 - THE PICK -UP AND DROP -OFF FACILITY PROCESSES COMPONENT:

This comprises processes carried out upon the processing set -up described in COMPONENT 7 as a means for controlling the operation of the components connected to said processing set - up and for the purpose of creating and maintaining records essential to the working of the system as described below and comprises of some or any of the following processes and program instructions for effecting these processes :

a) A process and program instructions for creating an unique record of a link for the purpose of linking the locker information or defined location information, with one or more labeled commodities as described and established in COMPONENT 2 and/or one or more labeled containers as established in COMPONENT 4, being deposited within the lockers or in defined locations as defined in COMPONENT 6 by using a barcode scanner or any other

label scanner or any other sensor to scan the unique identifying code on the commodities or containers and by scanning the unique identifying labels defined in COMPONENT 6 and by creating an unique record for use as link between the locker and the commodity or container being deposited within said locker or, by predefining the locker or defined location which will contain the commodity or container and creating an unique record of this relationship for use as a link between the locker and the commodity or container being deposited within said locker. Said process and program instructions will also link the said unique record of the link to related, previously recorded transactions and to records stored in integrated or associated programs for the purpose of creating new records

b)  A process and program instructions to link the user using identification input using COMPONENT 9 to the lockers or defined locations containing commodities related to the user at the facility and placed there either by the service company or by the user, by creating relational records for the purpose of relating previously recorded transactions and records created by any, some or all of the processes defined in COMPONENT 1, COMPONENT 2 , COMPONENT 3, COMPONENT 4, COMPONENT 5, and by COMPONENT 8 using said identification as a key record for the purpose of establishing the said relationship.

c)  Processes and program instructions for the activation of one or more of a plurality of output systems such as printers, computer screens, automated voice systems or any other output systems connected to the processing setup described in COMPONENT 7 to prepare and issue locker keys and displays or printouts of locker locations and access codes and to activate all control means for the control of the physical mechanisms of COMPONENT 6 such as setting of the locker combinations and displays, activation of locker and defined location loading and unloading mechanisms and transportation of commodities from the defined location by manual or mechanical means to a loading bay as defined in COMPONENT 6 c) upon input described in 8 b), to facilitate delivery and pick-up of the commodities by or to the user.

d)  Processes and program instructions to record the state of various sensors built into the components of the facility described in COMPONENT 6 communicate these states to COMPONENT 7 for further processing , and Command means to set the state of various displays and mechanisms defined in COMPONENT 6.

e)  A process and program instructions to link the user using identification input using COMPONENT 9 to consignments to the lockers or defined locations to contain deposits by users, by creating a unique code as a record of this transaction and/ or generating relational records for the purpose of relating previously recorded transactions and records created by any, some or all of the processes defined in COMPONENT 1, COMPONENT 2 , COMPONENT 3, COMPONENT 4, COMPONENT 5, and by COMPONENT 8 using said identification as a key record for the purpose of establishing the said relationship.

f)  Physical linking of a deposited consignment to user's earlier transactions for processing, by affixing a label containing an unique code generated by 8 e) to the deposited consignment or by using a coded label already affixed to the container containing more than one consignment and by establishing a link between the consignment and the locker or predefined location deposited during the drop -off, by predefinition or by scanning these labels at some point either during loading or unloading of the locker or defined locations, and by further linking this to details in the user's previously established transactions.

g)  Process and program instructions to link lockers or defined locations containing commodities related to many users to a multiple user grouping record created in COMPONENT 2 or in COMPONENT 3 or on an associated system to records created in COMPONENT 1, COMPONENT 2 , COMPONENT 3, COMPONENT 4, COMPONENT 5, and by COMPONENT 8 as a means of activating the processes of 8 e).

COMPONENT 9 - THE USER IDENTIFICATION COMPONENT:

This comprises:

a)  The use of one or more of many input systems, connected to the system components described in COMPONENT 1, COMPONENT 2 or by COMPONENT 3 and by COMPONENT 7, such as magnetic card readers , smartcard readers, retinal or fingerprint scannners, voice recognition systems, keyboards, keypads, computer pointing devices, barcode readers, optical character readers, wireless receivers and other any identification entry mechanisms to accept one or more of many inputs such as credit/debit cards, magnetic cards, smartcards, retinal or fingerprint scans, or voice, or barcode, or optical characters, or wireless signals or other identification mechanism or any other data input through a keypad or keyboard or by any other means connected to the aforesaid system components or otherwise connected to the locker system defined in or to the predefined location systems defined in COMPONENT 6, as a means of recording user identification and for the use of the processes described in COMPONENT 1, COMPONENT 2 , COMPONENT 3, COMPONENT 4, COMPONENT 5, and by COMPONENT 8)

b)  The use of any of the said input either or both as a mechanism for the purpose of user identification and as a payment mechanism to debit or credit the user as per established commercial practices by processes integral to or linked to the processes described in COMPONENT 1, COMPONENT 2, COMPONENT 3, by COMPONENT 4, COMPONENT 5, and by COMPONENT 8

c)  The input of a pre-established user grouping record code created and established in COMPONENT 2 or COMPONENT 3 or on an associated system, through one or more of many input systems connected to the system component described in COMPONENT 7 as a means of invoking the processes of COMPONENT 8 g) .

Description of the process and the system using the said components :

Commodities for rental or for purchase are selected from a variety of choices presented through a vendor's computerized sales system accessed over the internet , on a dedicated network or at a stand alone computer system where the user inputs details of an order for transmission to the vendor. As part of the ordering process the user may be presented with COMPONENT 1 and performs all or any of the required operations upon said component. The said component may also be presented as a part of the vendor's return or commodity acceptance system. The order or return is confirmed with the provider. These details are then linked to details of the order and details of the commodities being ordered by using COMPONENT 2 or COMPONENT 3. An user grouping record may also be created by combining sets of consignments for users based on pick –up locations and times to provide means for a delivery agent to pick –up consignments for a number of users at the same time as described in COMPONENT 9 c) AND COMPONENT 8 g).

The ordered commodities are packaged with a label created by COMPONENT 4 containing a code to link the physical consignment to the delivery details by means of said label being affixed to the package or the commodities are packed in a labeled bin as described in COMPONENT 5 . A link is established between the commodities and the container containing more than one packaged commodity by scanning the labels on the commodities and the container or by generating and affixing a label containing a linking code for the container or by predefining the container as described in COMPONENT 4. The package is then transported to a facility having either lockers or predefined locations or a combination of these as described in COMPONENT 6 and connected to a computerized processing system described in COMPONENT 7, empty lockers or predefined locations, some of which may be refrigerated or otherwise temperature controlled are loaded with the consignments or containers containing consignments. Consignments or containers containing consignments are either loaded manually or by mechanical means, means for these defined in COMPONENT 6, into pre-designated lockers or pre-defined locations or an association is established between the locker or pre-defined location and the consignment or container containing consignments by scanning the labels on the package and on the filled locker or pre -defined location as defined in COMPONENT 8 a). The association created as defined in COMPONENT 8 a) between the packages/containers and the locker or pre -defined location is updated on one or more computer systems integrated into this computerized system as defined in COMPONENT 7, using either wireless or wired data transmission and is available to the facility's computerized processing systems and to all systems connected to the said system. The state of displays and mechanisms of relevant components of COMPONENT 6 will also be set by the processes of COMPONENT 8 d).

The facility will contain one or more system interface terminals, connected to a computerized processing system as defined in COMPONENT 7 and will provide the ability for the user to communicate with the facility's processing components as described in said COMPONENT 7. When the user arrives at the facility to pick up or deposit commodities, the user is identified to the processing facility by scanning a credit/debit mechanism or any other ID mechanism previously recorded by the service company as described by COMPONENT 8 b) and COMPONENT 9. The user is then provided with details of the lockers containing consignments awaiting pick -up and is provided access to the lockers by the processes described in COMPONENT 8 c) said actions will also activate the processes of COMPONENT 8 d). Depending on the level of security installed by the service company at that location the user finds the lockers already unlocked, or unlocks the lockers by entering the access mechanism presented along with the locker number and location.

At some facilities all or part of the consignments awaiting the user will be stored in defined locations and delivered, using a mechanical conveyor system, as defined in COMPONENT 6b) and COMPONENT 6c), or manually, or by using a combination of the processes, to the loading and unloading bay described in COMPONENT 6 c) where the user is located within the facility, as identified to the system and to the user through a terminal located at the facility or by pre-arrangement, or by determining where the identification process described in COMPONENT 8 b) is initiated by the user.

If the user's consignment is in a locker as described in COMPONENT 6a), the user takes the consignment out of the locker and shuts the locker door activating sensors and mechanisms which provides input to the system as to the state of the locker by the processes of COMPONENT 8 d). The state of the locker is also communicated to processing systems linked to the locker by any means by said of COMPONENT 8 d) and related components.

If the package is contained in a returnable bin, as described in COMPONENT 5, the user deposits the bin in a receptacle and this return is recorded using a label scanner built into the receptacle to read the label on the container. The receptacle will also incorporate container dispensing mechanisms and record the label of the dispensed container for the purpose of linking this to other records and transactions as described as COMPONENT 6 d)

The user can make arrangements for deposits for pickup and processing by pre-arrangement with the service company through COMPONENT 1, COMPONENT 2 and COMPONENT 3 or through the system interface terminals at the facility described in COMPONENT 7. The process for identification for deposits in will be as described in COMPONENT 8 f) and COMPONENT 9.

The user will specify requisite details related to the commodity being dropped off using COMPONENT 6 and requirements for the type of locker and containers, said details being processed by COMPONENT 8 e) and COMPONENT 8 f).

All arrangements for pick -up and drop -off can be made either at a system interface terminal as described in COMPONENT 7 located at the facility or located elsewhere and connected to any other system connected to any system which in turn is connected to the facility's processing systems by any means as described in COMPONENT 1, COMPONENT 2, COMPONENT 3 and COMPONENT 7.

An user will also be able to access dispensing ,vending or service machines either connected or not connected to the processing facility described in COMPONENT 7 to dispense and/or vend commodities and to provide services to the user when at that location as specified in COMPONENT 6 c) and in COMPONENT 6 e).

All computerized processing systems used in this system are interconnected, either through the internet or by other means to facilitate availability of any information at any point and at any time where required within this system or to other systems

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

Claim 1:

A computerized pick -up and drop -off information system for the purpose of displaying, recording, processing, storing and transmitting records containing commodity pick-up or commodity drop -off related information, which will comprise all or any of

a) An input and display component presented on any displays connected to computers connected over the internet or on any displays connected to another computer system or on any displays on any independent computer system or to work on any displays of computers operating in any of these modes, to present input and or display screens to users over the internet, over a dedicated network, at a stand alone computer console or any combination of these, to offer a choice of and to accept input of and to communicate, to the processing component described in Claim 1 b), pick-up or drop -off locations, pick-up or drop -off times, pick-up or drop -off related charge details and user details, user payment mechanism details, consignor and consignee identification details, pick -up or drop -off commodity details, or any combination of these , through any input device connected by any means whatsoever to the computer to which the displaying device is connected.

b) A processing component, operating independently or integrated with Claim 1 a) , said component including program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system - to operate on computer processors integral to computers connected over the internet or on computer processors integral to computers connected to another computer network or on computer processors integral to an independent computer system or to operate on any computer processors integral to computers operating in any of these modes - to process existing records and to create new records by linking the data input by the user to consignor and consignee identification details, payment mechanisms and details, identification mechanisms , pick-up and drop -off related payment arrangements, pick-up or drop -off locations, pick-up or drop -off times or any combination of these, either to records newly entered by the user within the input component in Claim 1a) or to records previously established by the user, details of which may reside on integrated or associated systems. The recording, immediate and further processing, storage, display, printing, transmission and use of records thus created.

c) A networking component either operating independently within this system or interfacing with system or network components resident on any computers operating Claims 1 a) and b) and using the standard commercial networking hardware and communication protocols available to the computers on which the processes

described in Claims 1 a) and b) are performed, for the purpose of linking this system to integrated or associated systems, either through the internet or through dedicated lines, to receive information required for the operations integral to Claims 1 a) and b) and to transmit the results of the operations performed by to Claims 1 a) and b)

d) A standard comercial computer memory hardware and memory management component to support the functionality defined in Claim 1 a), Claim 1 b) and Claim 1 c), said component resident on any system on which the functionality defined in Claim 1 a), Claim 1 b) and Claim 1 c) is operating or on networked or otherwise connected systems to store, either permanently or temporarily, all or any of the information required by or created in the display, processing, or networking components defined in Claims 1 a), b) and c).

e) An output component comprising any standard computer output devices connected to the said system for the purpose of printing or otherwise outputting any or all records created by the processes of this claim.

f) A standard comercial computer operating system component resident on the computer system on which this system will operate having program and command instructions to enable the functioning of Claims 1 a), b), c), d) and e).

Claim 2:

A computerized pick -up, drop -off , consignment, consignor and consignee information processing system for the purpose of displaying, recording, combining, processing, storing and transmitting records containing pick-up or drop -off related information gathered through Claim 1 with all or any of consignment details such as sizes, weights, dimensions , quantities, consignor and consignee details and any or all other details relating to consignments, which may reside on integrated, associated or related systems or which may be entered directly into this system comprising all or any of

a) An input and display component to be presented on any displays connected to computers connected over the internet or on any displays connected to another computer system or on any displays on any independent computer system or to work on any displays of computers operating in any of these modes, to present input and or display screens to users over the internet, over a dedicated network, at a stand alone computer console or any combination of these, to offer a choice of pick-up or drop -off locations, pick-up or drop -off times, pick-up or drop -off related charge details and consignor and consignee details, consignor and consignee payment mechanism details, pick -up or drop -off commodity details, consignor and consignee identification details or any combination of these, and to accept input through any input device connected to the computer to which the displaying device

is connected by any means whatsoever and to communicate to the processing component described in Claim 1 b)

b) A processing component, capable of operating independently or integrated with Claim 2 a), , said component including program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system - to operate on computer processors integral to computers connected over the internet or on computer processors integral to computers connected to another computer network or on computer processors integral to an independent computer system or to operate on any computer processors integral to computers operating in any of these modes - to process existing records and to create new records by combining and processing information gathered through Claim 1 with all or any of details relating to consignments for pick -up or drop -off including consignor and consignee details, consignor and consignee identification details, pick-up or drop -off locations and any or all other details relating to consignments for pick -up or drop -off, which may reside on integrated, associated or related systems or which may be entered directly into this system through 2 a) . The recording, immediate and further processing, storage, display, printing, transmission and use of records thus created.

c) A networking component either operating independently within this system or interfacing with system or network components resident on any computers operating Claims 2 a) and b) and using the standard comercial networking hardware and communication protocols available to the computers on which the processes described in Claims 2 a) and b) are performed, for the purpose of linking this system to integrated or associated systems, either through the internet or through dedicated lines, to receive information required for the operations integral to Claims 2 a) and b) and to transmit the results of the operations performed by to Claims 2 a) and b)

d) A standard commercial computer memory hardware and memory management component to support the functionality defined in Claims 2 a), b) and c), said component either resident within this system or resident on integrated or associated systems to store, either permanently or temporarily, all or any of the information required by or created in the display, processing, or networking components defined in Claims 2 a), b) and c).

e) An output component comprising any standard computer output devices connected to the said system for the purpose of printing or otherwise outputting any or all records created by the processes of this claim.

f) A standard commercial computer operating system component resident on the computer system on which this system will operate having program and command instructions to enable the functioning of Claims 2 a), b), c), d) and e)

Claim 3:

A computerized system combining all or any of the functionality of the systems described in Claims 1 and 2.

Claim 4:

A process for the creation and use of a link between the consignment and the details established in Claims 1 and 2 or by Claim 3 comprising

a) Program instructions , said program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system - for the creation of a unique record of the link between the actual consignment and the consignment and consignee details processed by the processes established in Claims 1 and Claim 2 or by Claim 3, for the purpose of generating a unique consignment code. Said program instructions creating a unique record by generating a unique identifying code for each consignment and operating within the system described in Claim 2 or by Claim 3 or within integrated, associated or related systems.

b)The creation and use of a physical link between the consignment and the details established in Claims 1 and 2 or by Claim 3, by creating a barcode label or any other identification label using an output component comprising any standard commercial or special computer output devices connected to the any of the systems upon which Claim 4 may operate, for the purpose of printing or otherwise outputting any or all records containing this unique code, created by said process, and affixing said label to the consignment.

The recording, immediate and further processing, storage, display, printing, transmission and use of records created by said process.

Claim 5:

A process for the creation and use of a link between the consignment and a container containing more than one consignment comprising

a) Program instructions, said program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system, for the purpose of relating a consignment to a container containing grouped consignments by generating a unique container code to relate the said container to said consignments and to be used as a means for generating a grouped consignment code or, to relate a predefined container code to consignments to held within the said container by specifying which of the said consignments are to be contained in which of the said predefined containers and the use of the predefined code associated with the said container as a means of generating a grouped consignment

code. Said program instructions operating within the system described in Claim 2 or by Claim 3 or within integrated, associated or related systems.

b) The creation and use of a physical link between the consignment and a container containing more than one consignment, by creating a barcode label or any other identification label containing the grouped consignment code created by Claim 5 a), using an output component comprising any standard commercial or special computer output devices connected to the any of the systems upon which this claim may operate, and affixing this label to the container and then scanning the container code label and the consignment code labels as a means of establishing the grouped consignment code.

The recording, immediate and further processing, storage, display, printing, transmission and use of records created by said process.

Claim 6:

The use of containers pre -labeled with a barcode or by other means, disposable or reusable, for the process described in Claim 5.

Claim 7:

A commodity distributing locker apparatus comprising:

A plurality of lockers of the same or different dimensions each identified and labeled with a barcode or by other means with an unique identifying code, for holding and dispensing consignments therein, collectively or individually accessible from the rear, Each having some, any or all of the following features: Means for refrigeration or other temperature control facility and mechanisms, an electronic display panel on the front, a locking mechanism on the front with automated combination setting mechanisms with a control means for controlling the setting of the locking mechanism to the same code for one or more lockers . An electromagnetic, mechanical or optical key or any other key mechanism to allow opening of the front door of the locker using a suitable key containing the code to open the lock, a detection sensor built into the door and frame of the locker to determine if the locker is open or closed, an electro-mechanical door opening and closing mechanism, Red, Yellow and Green electronic indicators at the front and rear doors of the locker , an audio signal emitting device, an electromagnetic or electronic mike and speaker system, object sensors within the locker, An automated system for loading and unloading the lockers. Built in readers, scanners or sensors to read the labels on consignments deposited therein and sensors to assist automated loading and unloading functions. Each locker connected to the processing setup described in Claim 11, or to one or more electronic data processing and control units with resident memory, input and output devices and one or more terminals and resident

and remotely accessed program instructions for localized processing or for networking with other computers through the internet or through dedicated lines for the purpose of communicating information about the contents of the lockers, setting the electronic lock combinations for the locker, to sense the outputs from the sensors built into the lockers and to communicate information to set the state of the indicators and displays built into the front and rear doors of the lockers and to provide input to the control means for automated mechanical loading and unloading equipment operating upon the locker..

Claim 8:

A commodity distributing storage facility comprising: ·

A plurality of defined locations of the same area and dimensions or of different areas and dimensions, each identified and labeled with a barcode or by other means with an unique identifying code, for storing packages therein, each defined location having some, any or all of the following features: Means for Refrigeration or otherwise Temperature Controlled, Shelving, built in readers or scanners to read the labels on consignments deposited therein and sensors to assist automated loading and unloading functions, built in automated mechanical loading and unloading equipment. Each defined location connected to the processing setup described in Claim 11, or to one or more electronic data processing and control units with resident memory, input and output devices and one or more terminals and resident and remotely accessed program instructions for localized processing or for networking with other computers through the internet or through dedicated lines for the purpose sensing the outputs from the sensors located in the defined spaces and to communicate information to determine the state of the indicators and displays located within, or in the vicinity of the defined spaces and to and to provide input to the control means for automated mechanical loading and unloading equipment operating upon the defined location.

Claim 9:

A process and program instructions , said program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system - for linking of the locker information or defined location information with the one or more commodities being deposited within the lockers as defined in Claim 7 or in  defined locations as defined in Claim 8, using a label scanner or any other sensor or by predefining the locker or defined location which will contain the commodity. The recording of this information and linking this information

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to related, previously recorded transactions and records stored in integrated or associated programs for the purpose of creating new records using the system described in Claim 10. The recording, immediate and further processing, storage, transmission and use of records thus created.

Claim 10:

A pick -up and drop -off facility processing system comprising one or a plurality of computers, and program instructions operating upon these , said program instructions integrated or not integrated with a standard commercial business data storage and management component operating upon said system and total command means for performing any of the processes within the facility as described in Claim 17 , connected to one or a plurality of lockers as described in Claim 8 and to one or a plurality of defined locations as described in Claim 9 and connected to one or a plurality of computer input, display and output devices within the facility at which the lockers and defined spaces are situated, these connected to integrated or associated computer systems on connected computers, through one or a plurality of dedicated networks or through the internet, for the purpose of performing the actions defined in Claim 1 and Claim 2 or by Claim 3, Claim 4, Claim 5 , Claim 9, Claim 10, Claim 11, Claim 12, Claim 13 and Claim 14 and for the purpose of accepting input from users and communicating information to users.

Claim 11:

The use of one, or more of a plurality of input systems, connected to the system described in Claim 10, such as magnetic card readers ., smartcard readers, retinal or fingerprint scannners, voice recognition systems, keyboards, keypads, computer pointing devices, barcode readers, optical character readers, wireless signals and other identification entry mechanisms to accept one or more of a plurality of inputs such as credit/debit cards, magnetic cards, smartcards retinal or fingerprint scans, or voice, or barcode, or optical characters, or wireless signals or other identification or any other data input through a keypad or keyboard or by any other means connected to the system described in Claim 10 or otherwise connected to the locker system or to the predefined location systems, as a means of identifying and linking one or more users to the lockers or defined locations containing commodities related to said user at that facility and placed there either by a service company or by the user . The recording of this information, creating new records based on this information and linking this information to related and previously recorded transactions and records created by any, some or all of the processes defined in Claim 1, Claim 2 or by Claim 3, Claim 4, Claim 5 and by Claim 9. The recording, immediate and further processing, storage, transmission and use of records thus created.

Claim 12:

The use of any of the input as defined in Claim 10 and Claim 11, either or both as a mechanism for the purpose of payment identification as a means to debit or credit the user as per established commercial practices and for the purpose of linking the user to consignments and to lockers or defined locations as a means of effecting pick-ups or drop-offs of commodities from or to the lockers or defined locations.

Claim 13:

The activation of one or more of a plurality of output systems such as printers, computer screens, automated voice systems or any other output systems connected to the processing system described in Claim 10 and the control means for the activation of physical mechanisms such as setting of the locker combinations and displays, preparation and issue of locker keys and activation of locker and defined location loading and unloading mechanisms and transportation of commodities from the defined location by manual or mechanical means to a loading bay as defined in Claim 14. upon input described in Claim 10 and Claim 11 , to facilitate delivery and pick-up of the commodities

Claim 14:

A loading bay comprising space for parking of a transport vehicle and a console connected to the processing utility described in Claim 10 for effecting the processes defined in Claim 11, Claim 12 and Claim 13 and incorporating a manual or an automated mechanical delivery system to effect pick ups or deliveries, to lockers or predefined locations, by the user, from said loading bay. The loading bay may include dispensing or vending machines to dispense or vend commodities to the user when at that location.

Claim 15:

A receptacle incorporating a scanning device or sensor, for receiving or dispensing containers as described in claim 6, and connected to the processing facility described in Claim 10 for reading the bar code or any other label affixed to the container described

in Claim 5 and in Claim 6 and to record return of the bin and to link the return to the records created as described in Claims 1 and Claim 2 or Claim 3.

Claim 16:

A Pick -up and drop -off facility either situated on its own premises or incorporated into other premises for the physical transfer of goods and commodities for the purpose of commercial and other transactions incorporating all or any of, in whole or part thereof, of details of Claims 1 through 15 both inclusive.